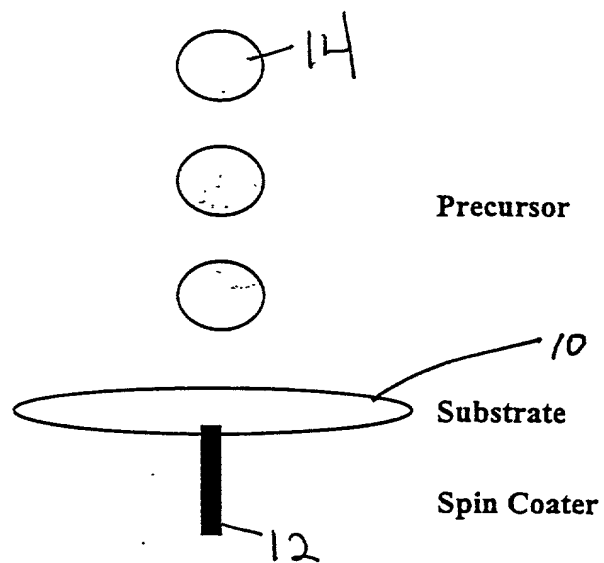
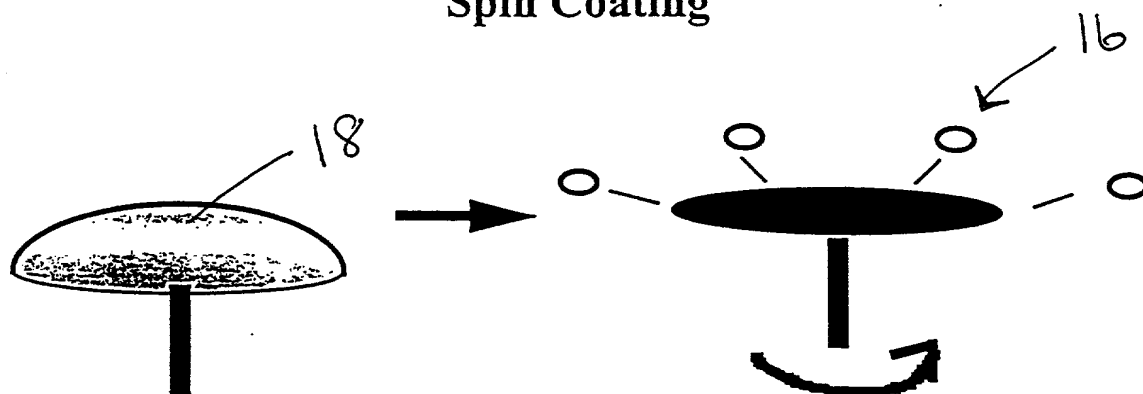


# Film Preparation

## Deposition

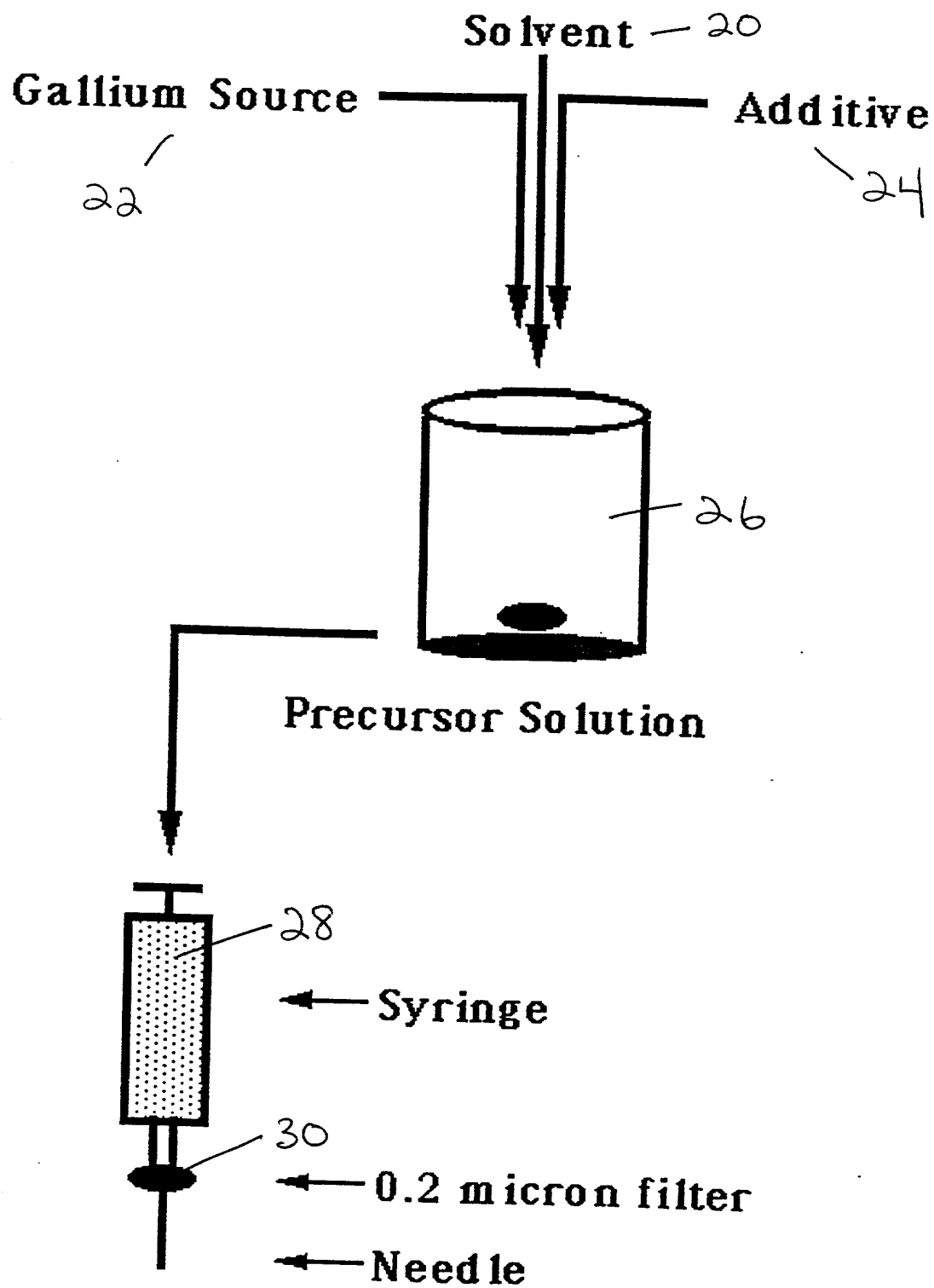


## Spin Coating



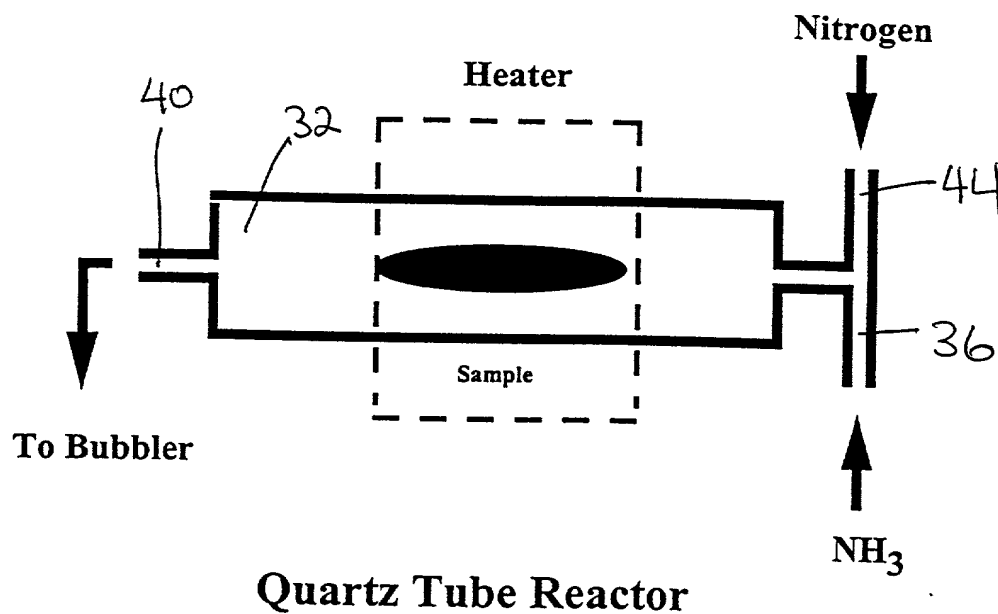
**FIGURE 1**

## Solution Preparation



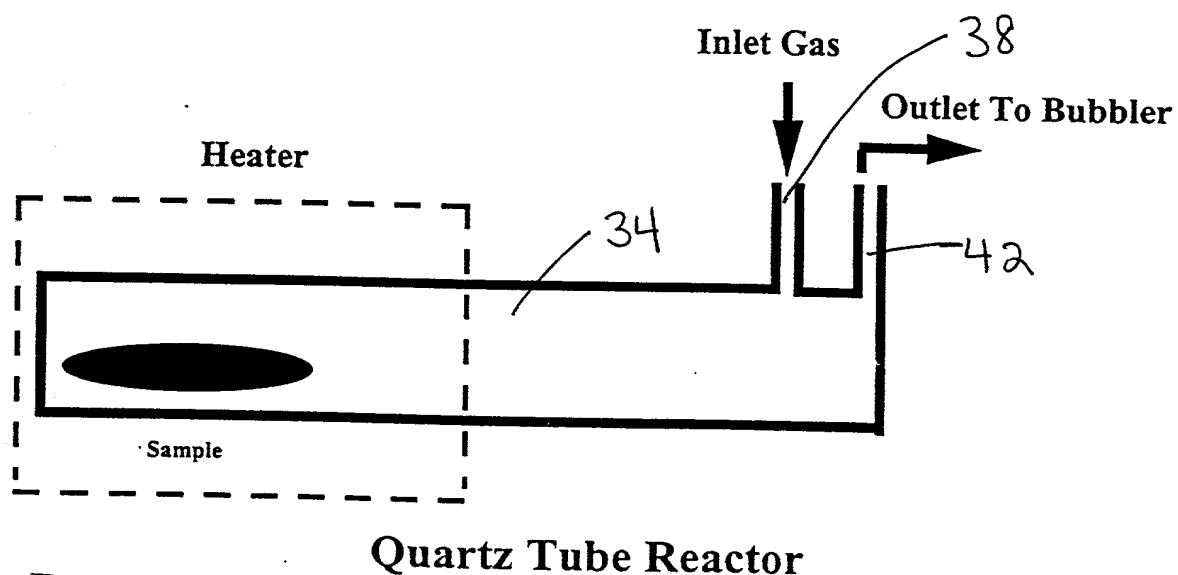
**FIGURE 2**

## Flow Through Reaction Tube



**A**

## Schlenk Reaction Tube



**B**

FIGURE 3

# Mass Spectrometer Experiment

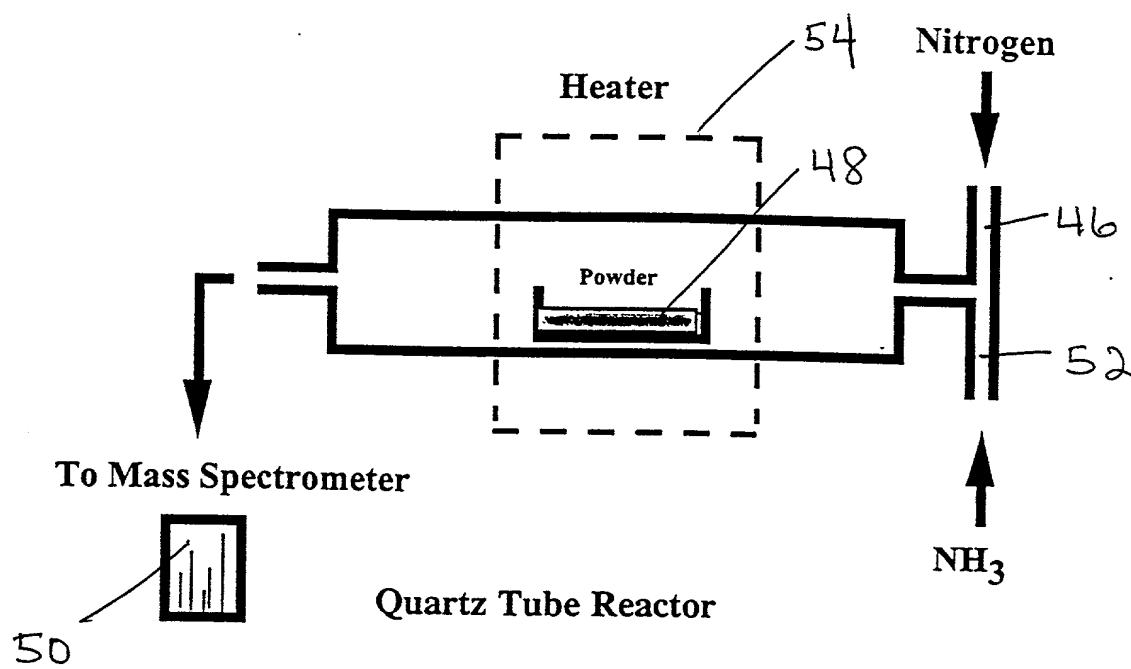


FIGURE 4

(C-plane) Al<sub>2</sub>O<sub>3</sub> Substrate

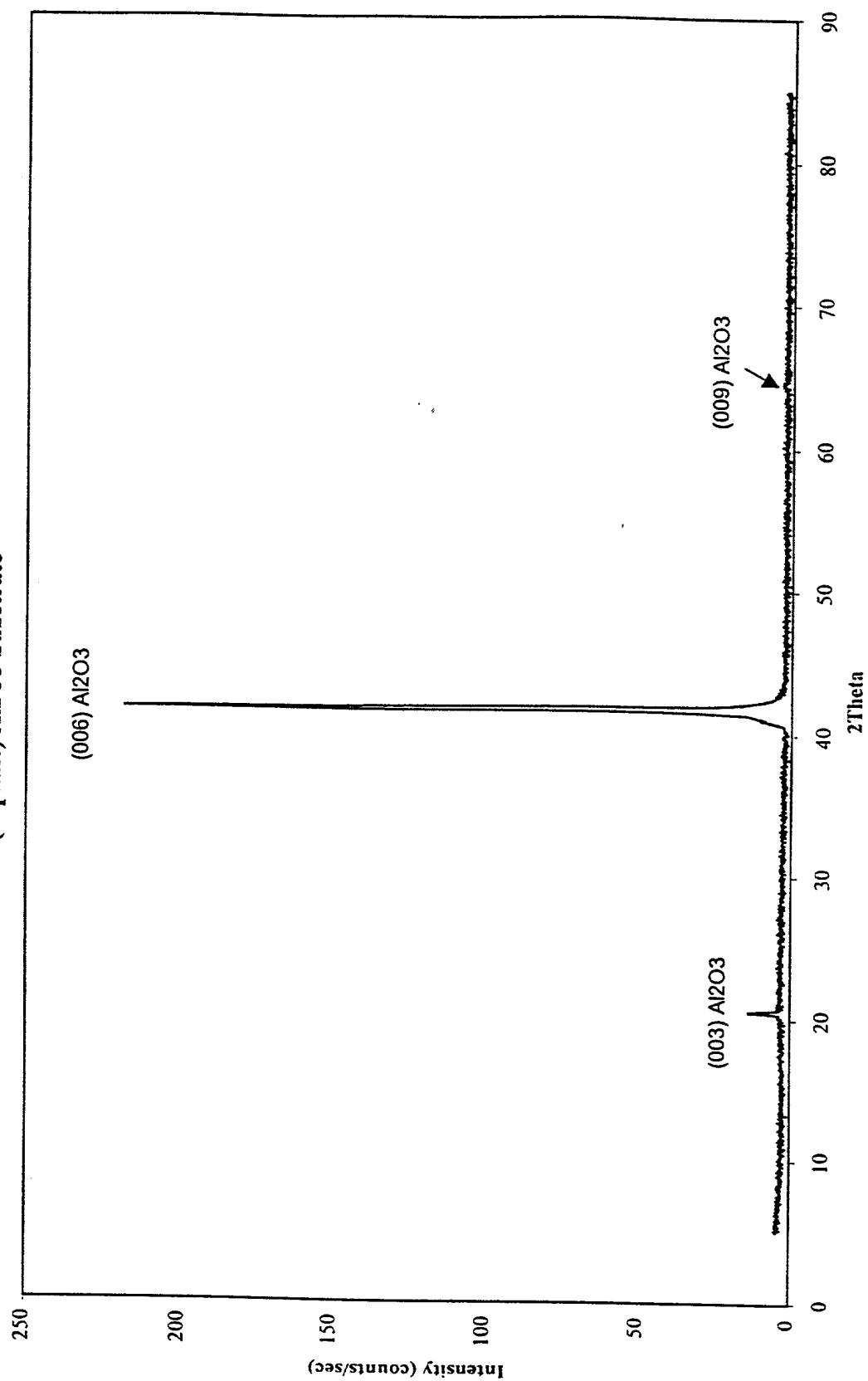


FIGURE 5A

# GaN from GDA,1000C

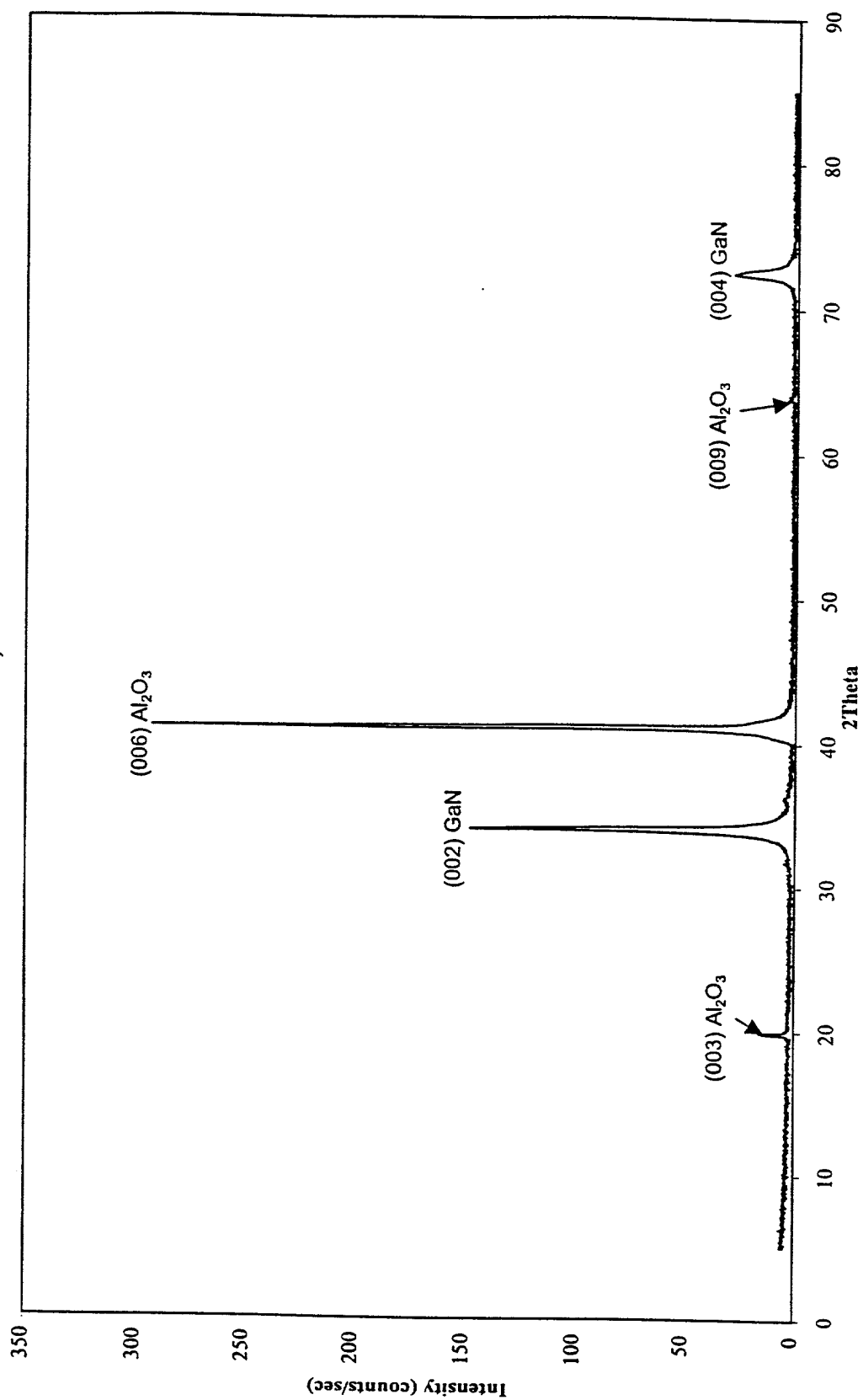


FIGURE 5B

13027 895553

# Off-Axis Phi Scan, GaN on Al2O3

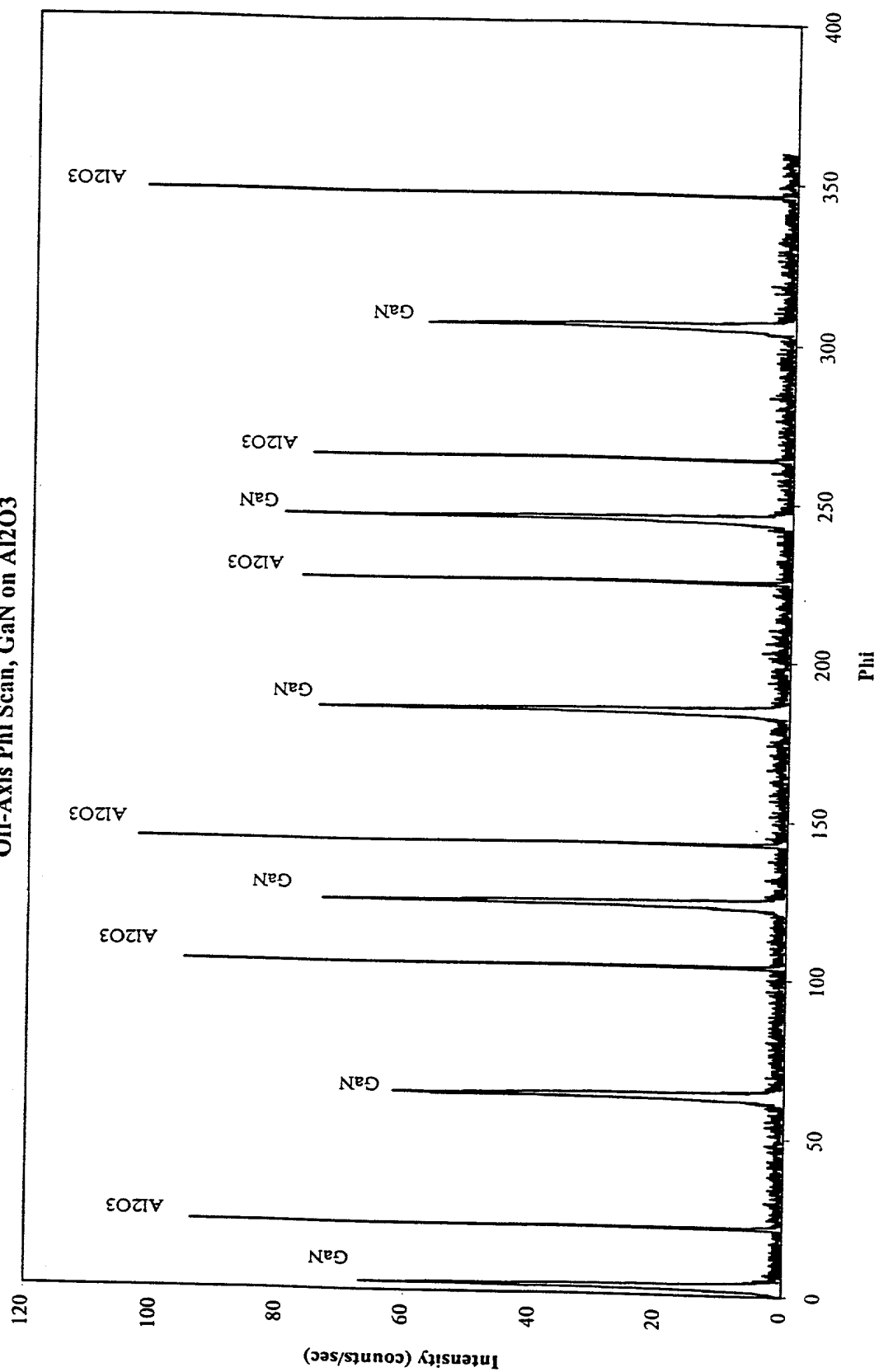


FIGURE 6

FOOT 626266

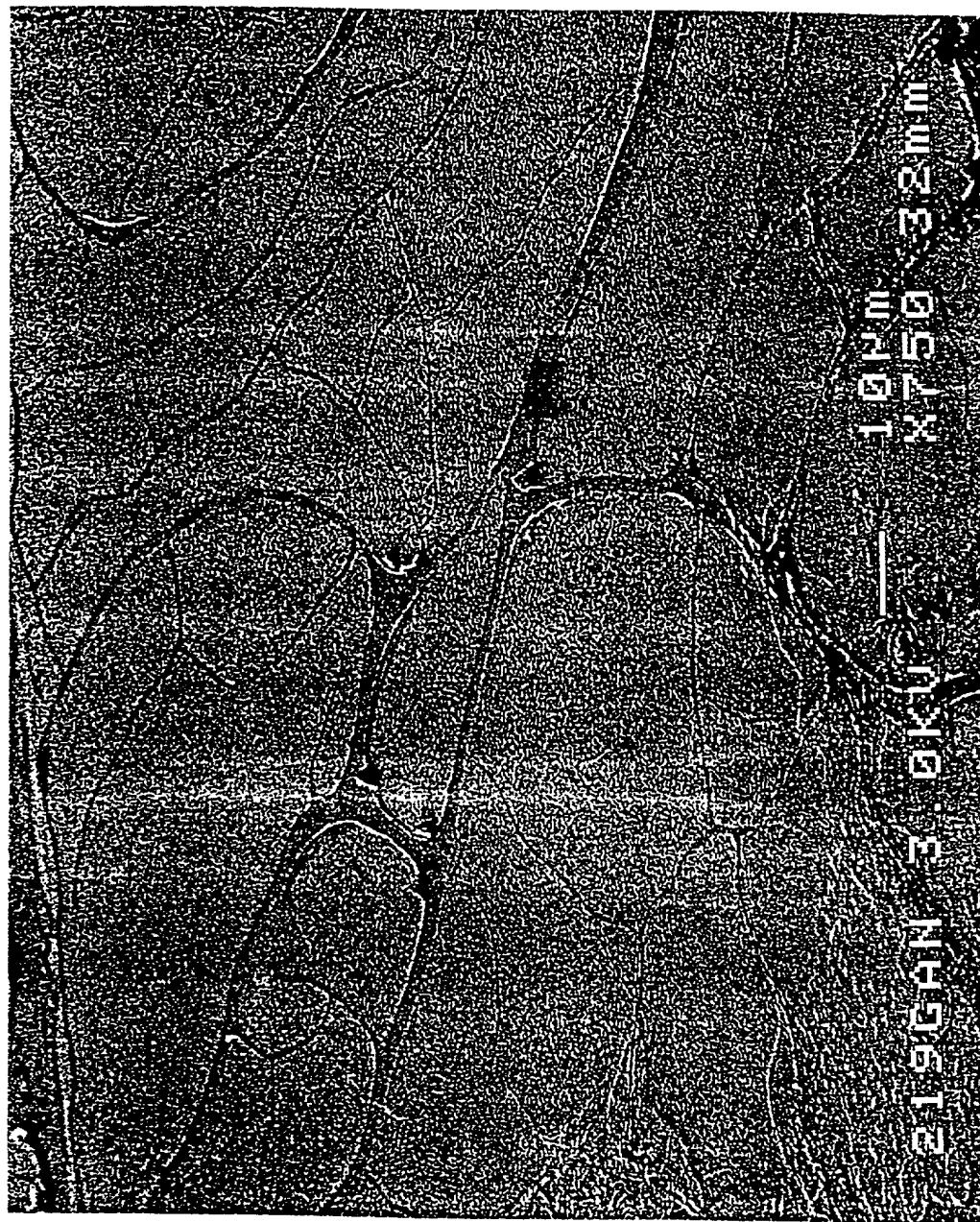


FIGURE 7



FOOT 6960000

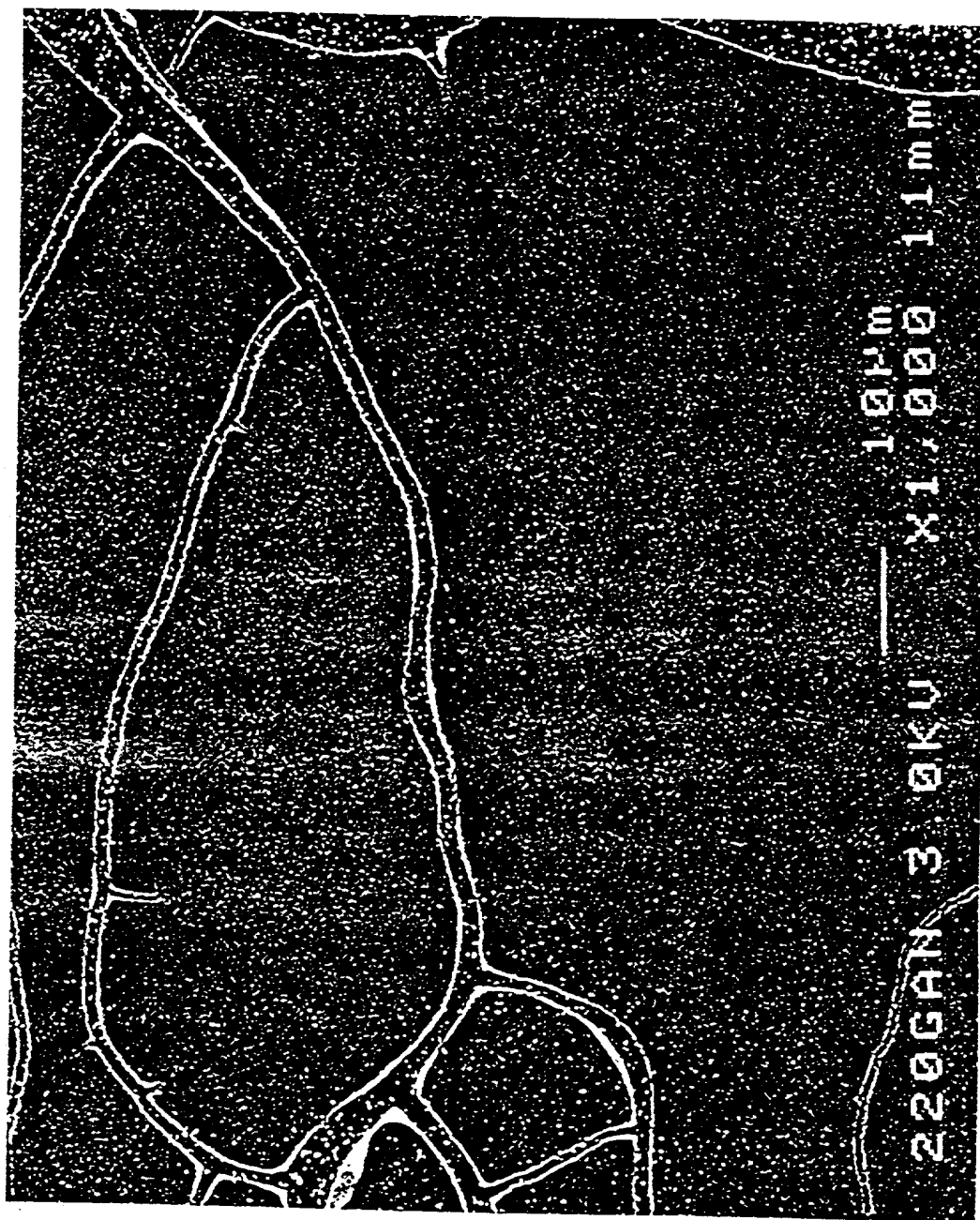


FIGURE 8

100211 00000000

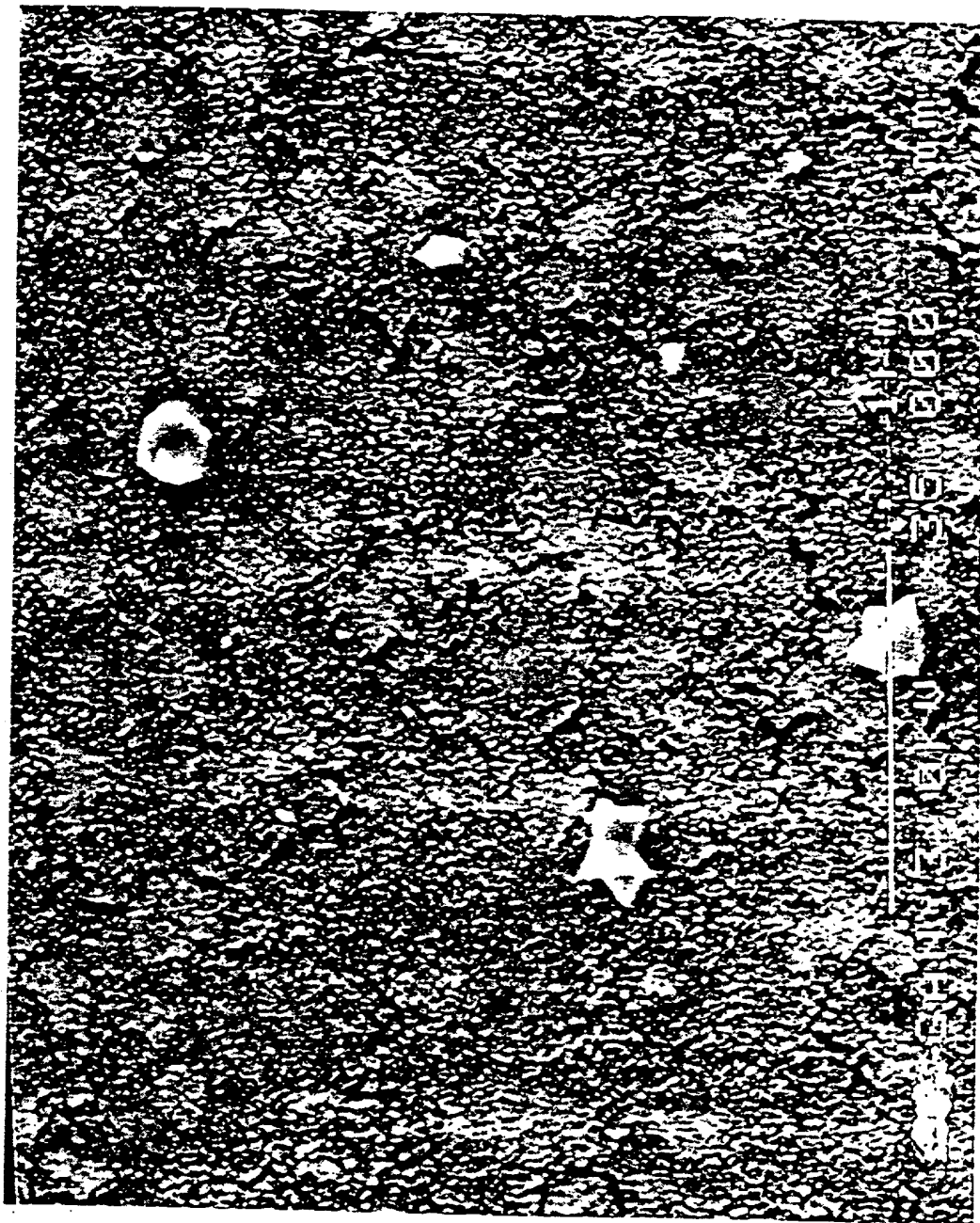


FIGURE 9

FOOT" 69588000

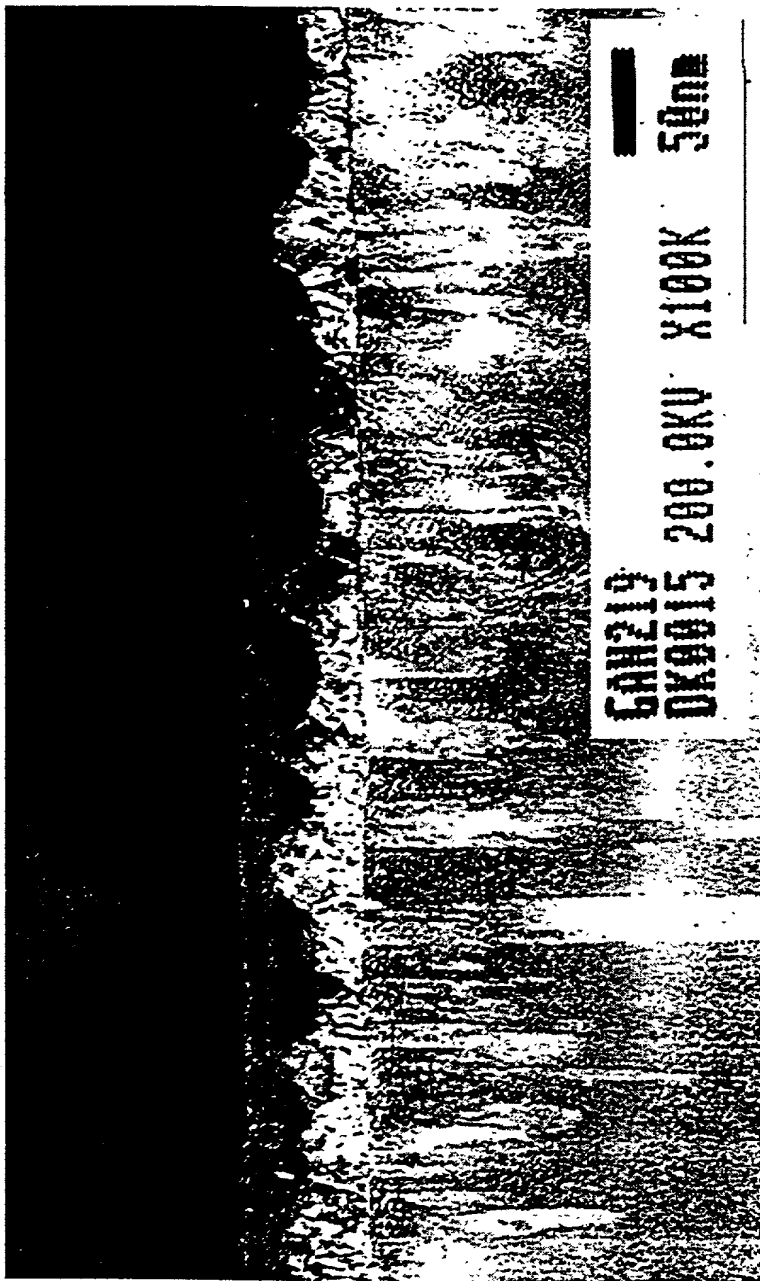


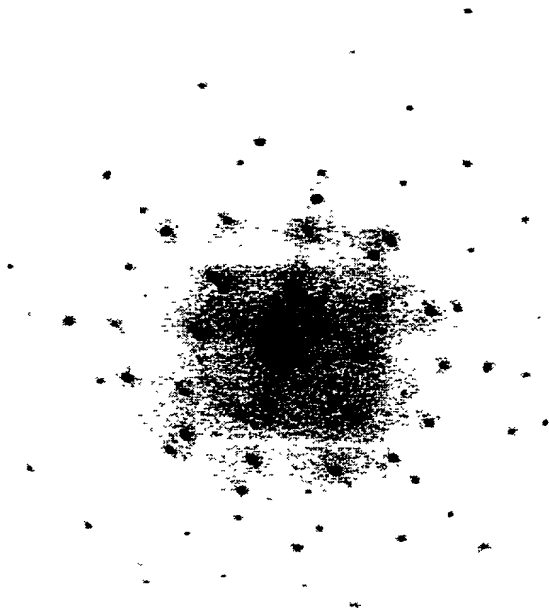
FIGURE 10

1997-05-05 09:00

GAH219  
DK0009 200.0KV 83.0cm

FIGURE 11

REF ID: A66666



LANZ19  
DR003 200.0KV 83.0cm

FIGURE 12

A circular, textured object, possibly a lens or a small globe, centered on a white background with scattered black specks. The object has a dark, grainy center that fades into a lighter, more uniform ring. The background is white with numerous small, dark, irregular specks scattered across it, resembling dust or noise.

GAH219  
040011 200 0011 03 000

FIGURE 13

64219  
00000 200 000 2000  
2000 200 000 2000



FIGURE 14

00000 200 000 2000

100nm

GD01200C JPR NH3

**FIGURE 15**



TOP LEFT: 69582550

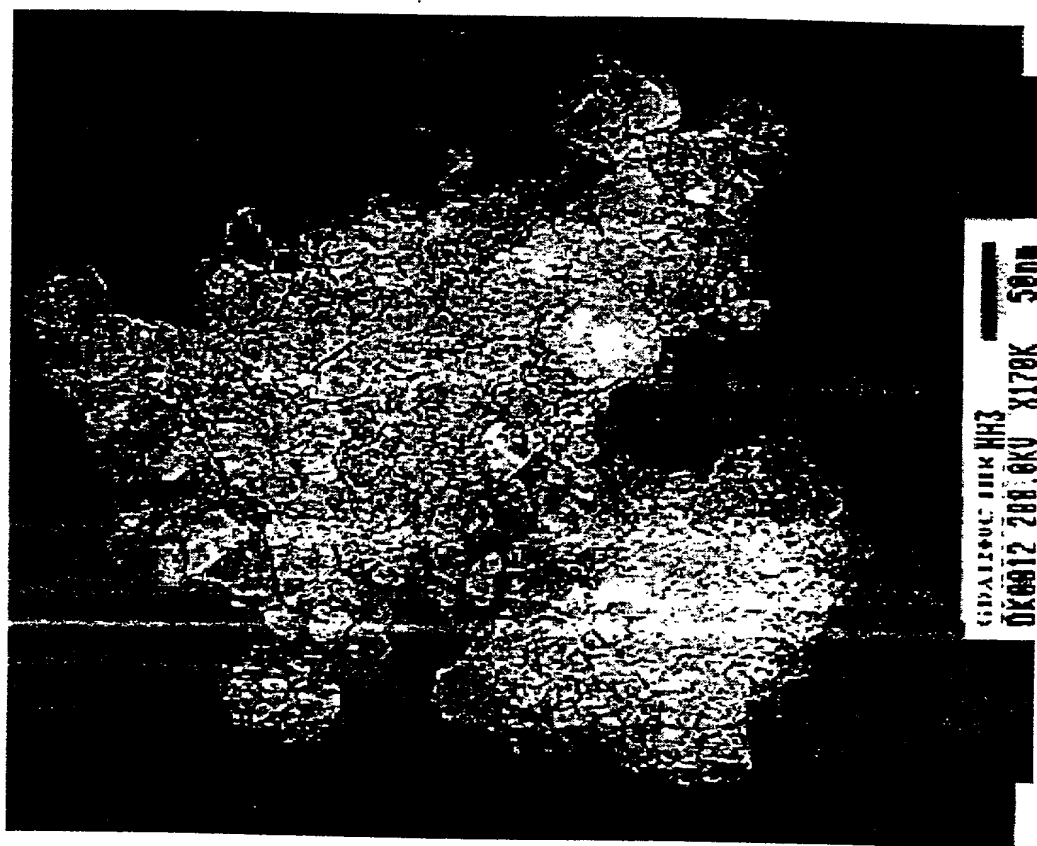


FIGURE 16

GaN from GDA, 600C

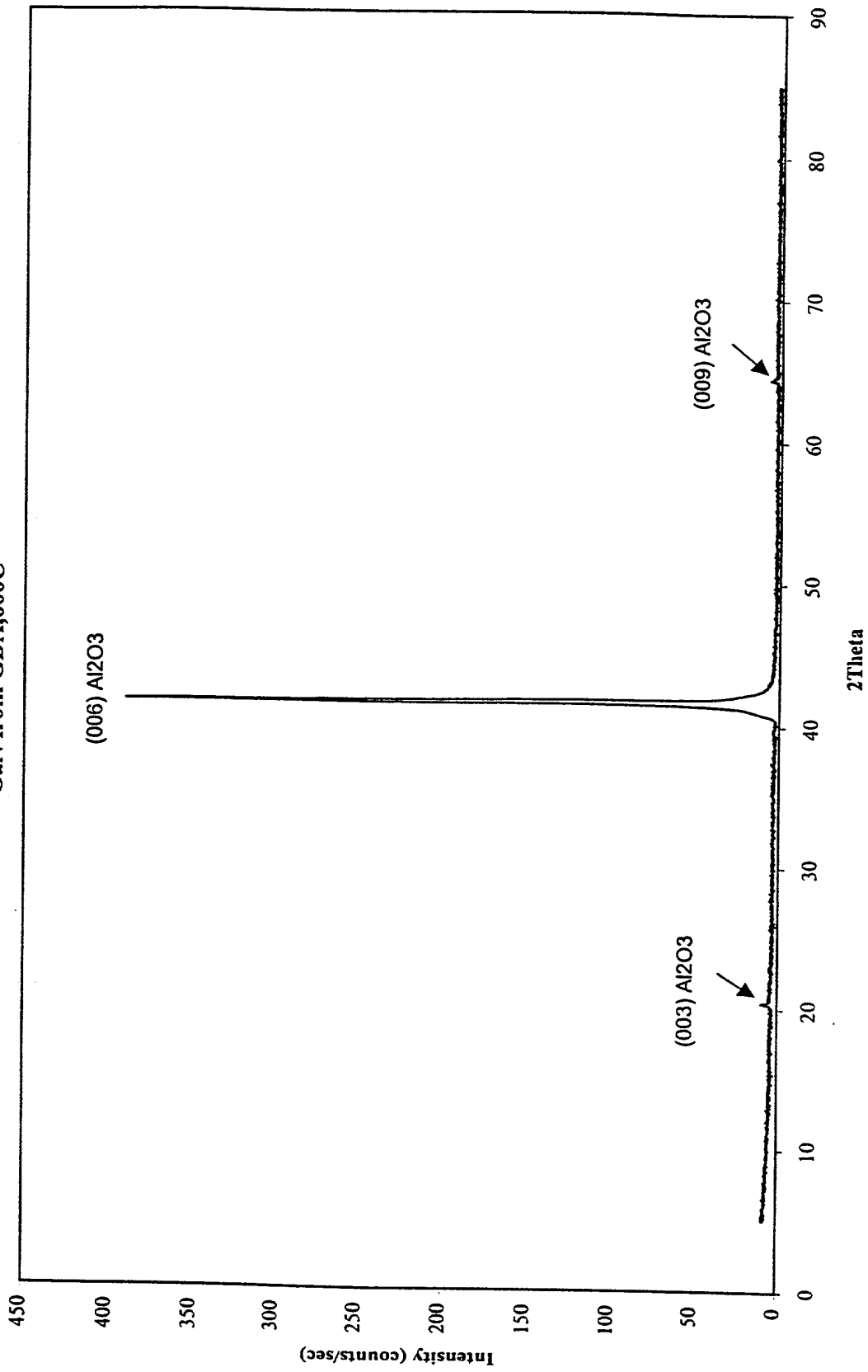
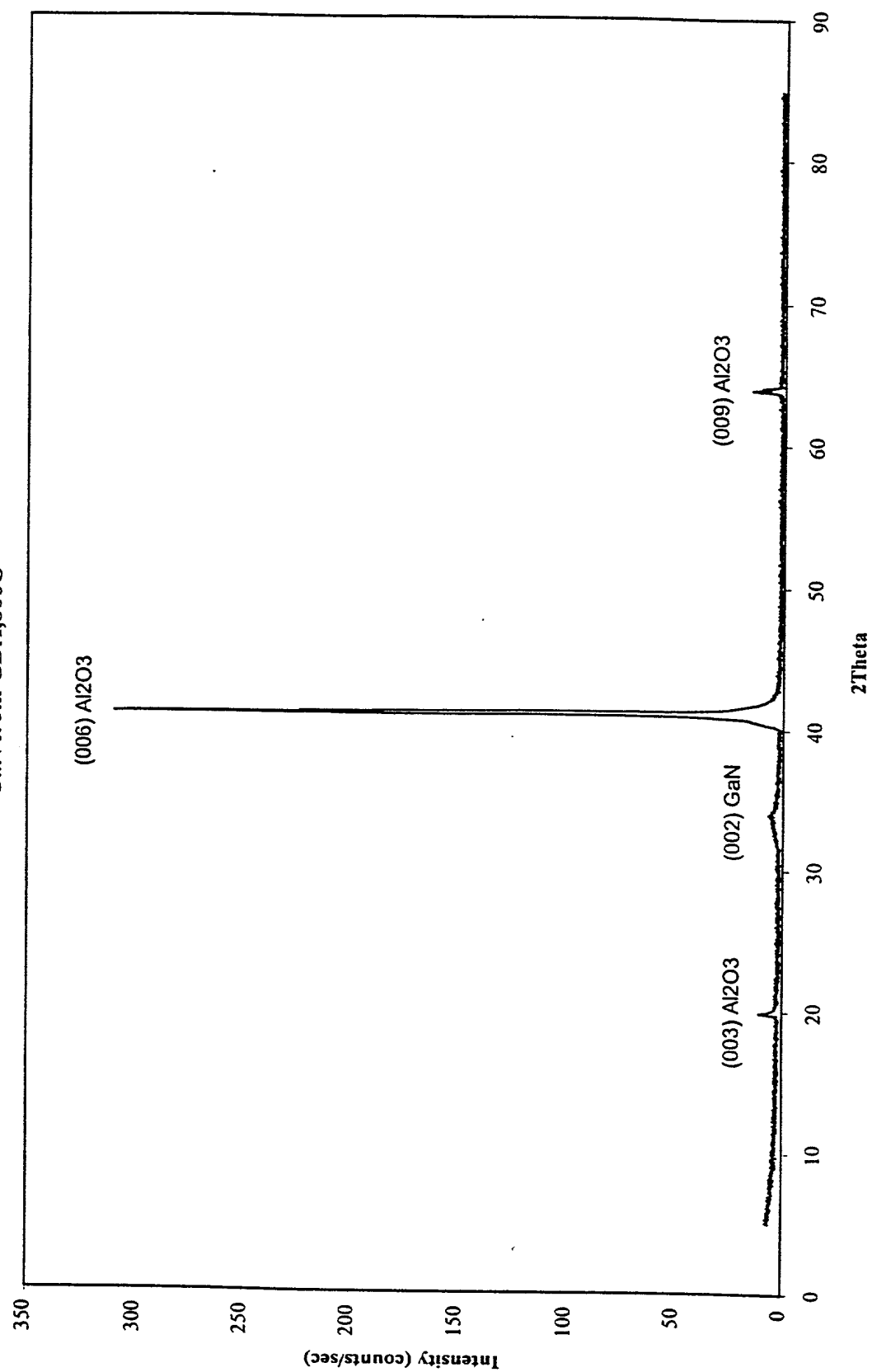


FIGURE 17A

GaN from GDA, 800C



**FIGURE 17B**

## GaN from GDA,900C

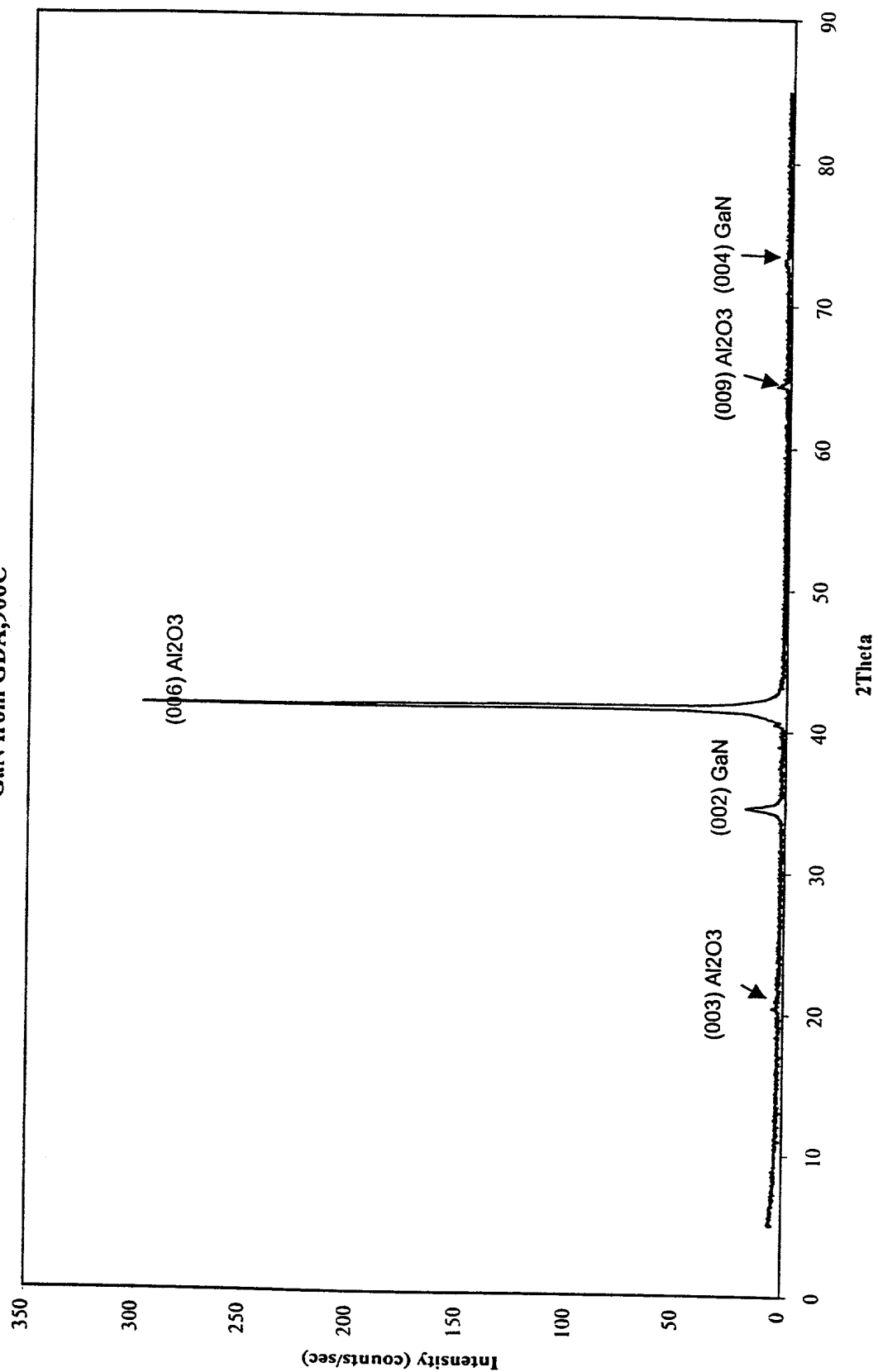


FIGURE 17C

WU 2017-06-06 10:00:00

GaN from GDA, 1000C

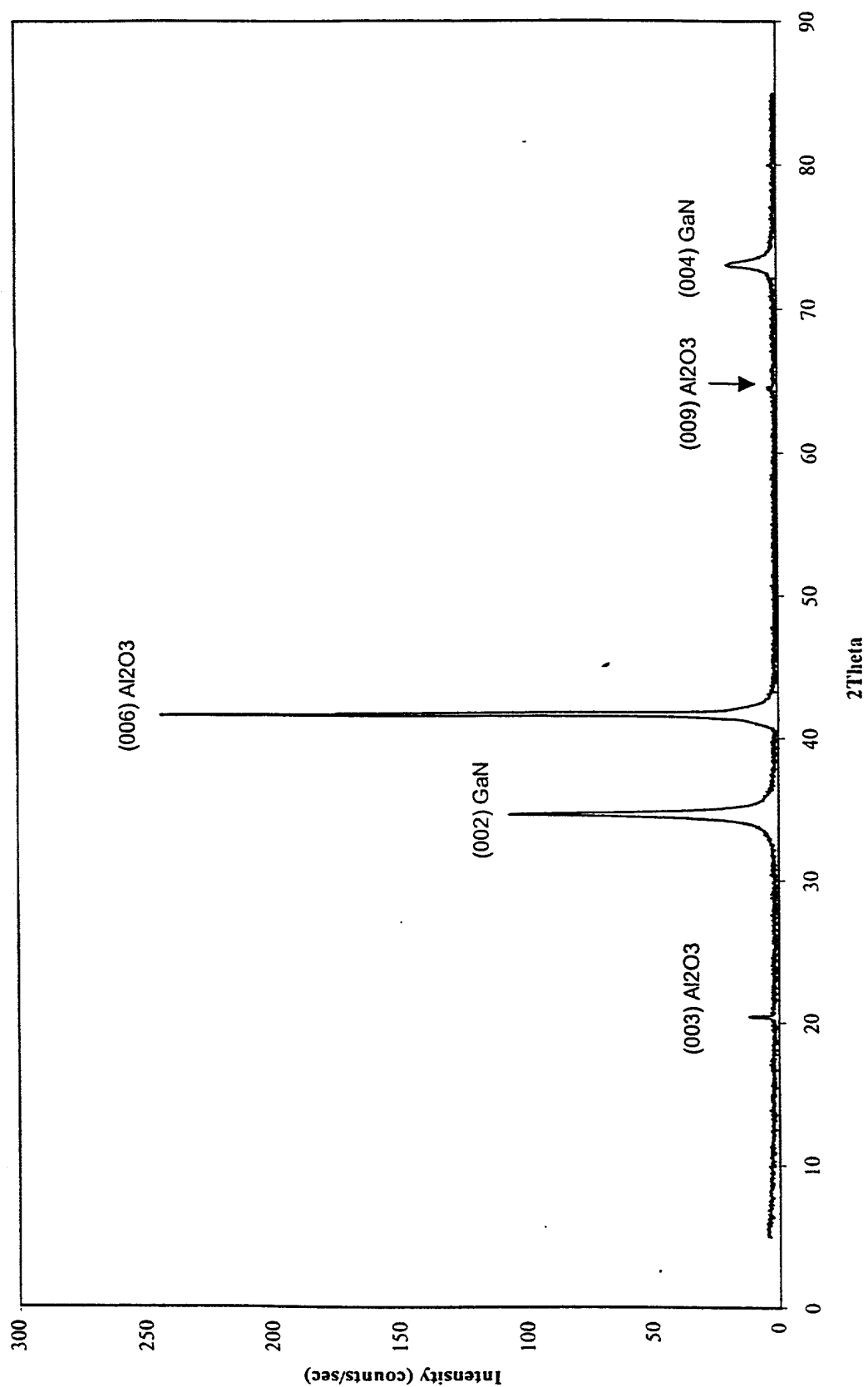
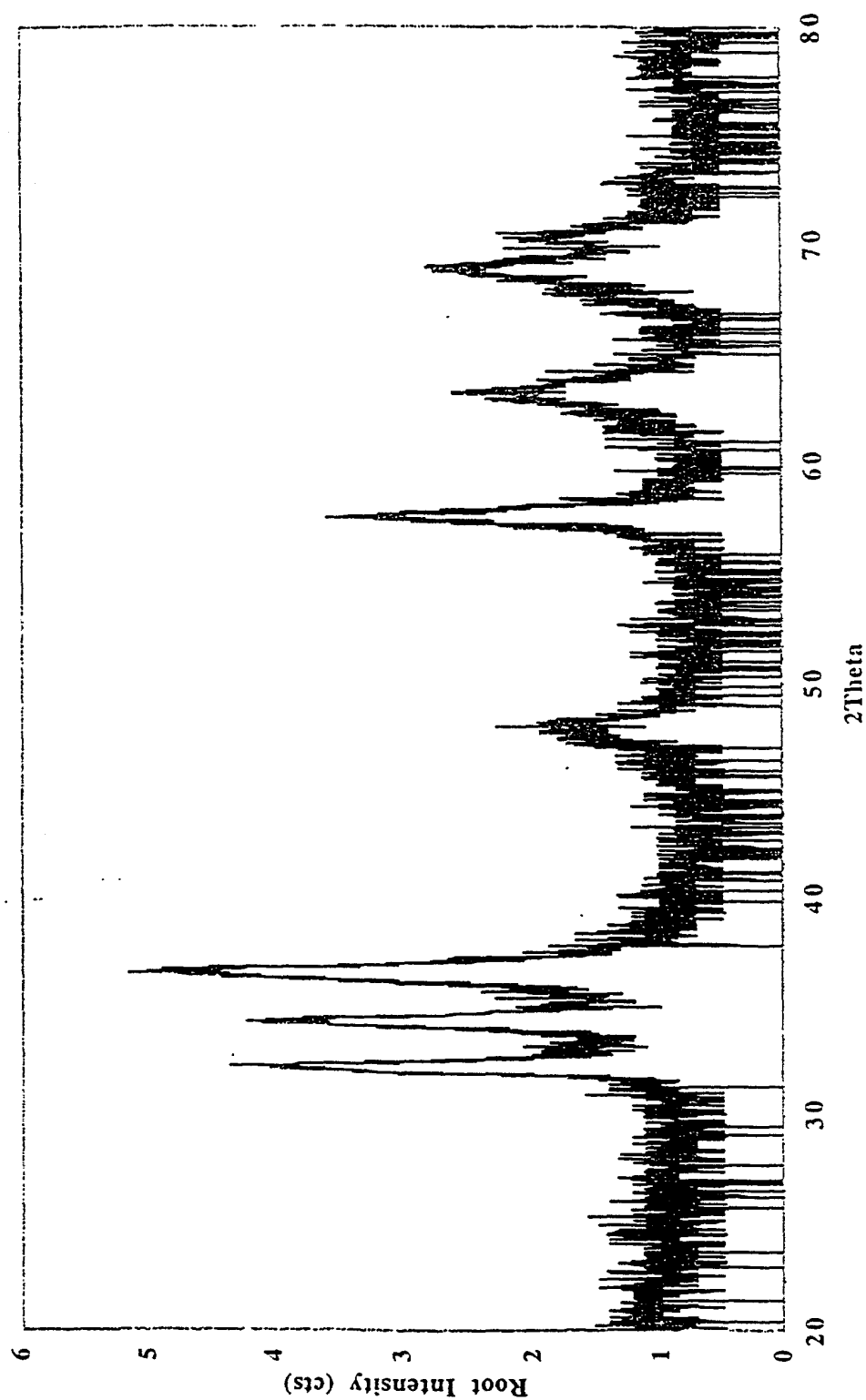


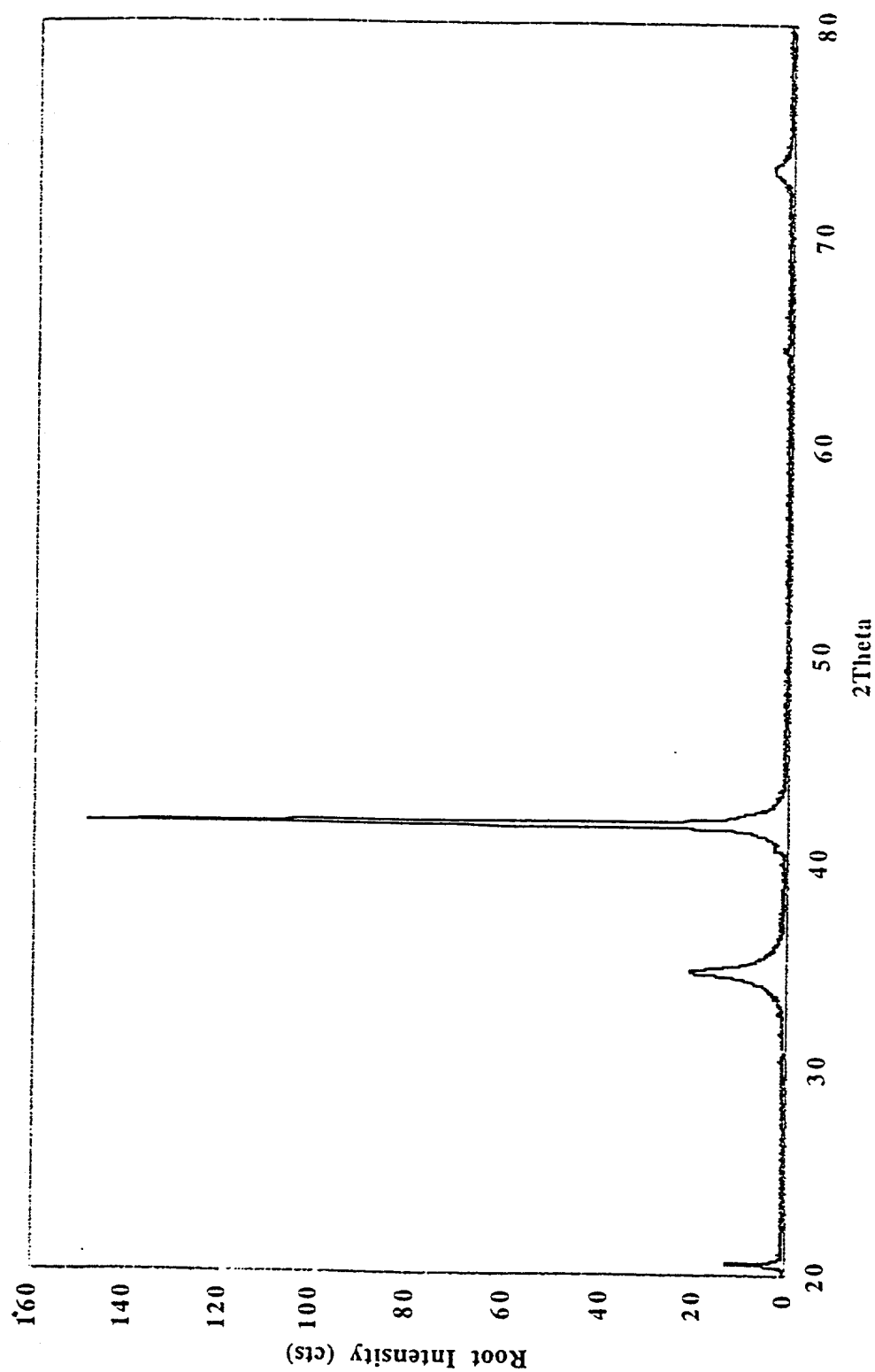
FIGURE 17D

GaN Powder from Ga<sub>2</sub>O<sub>3</sub> in Ammonia



**FIGURE 18**

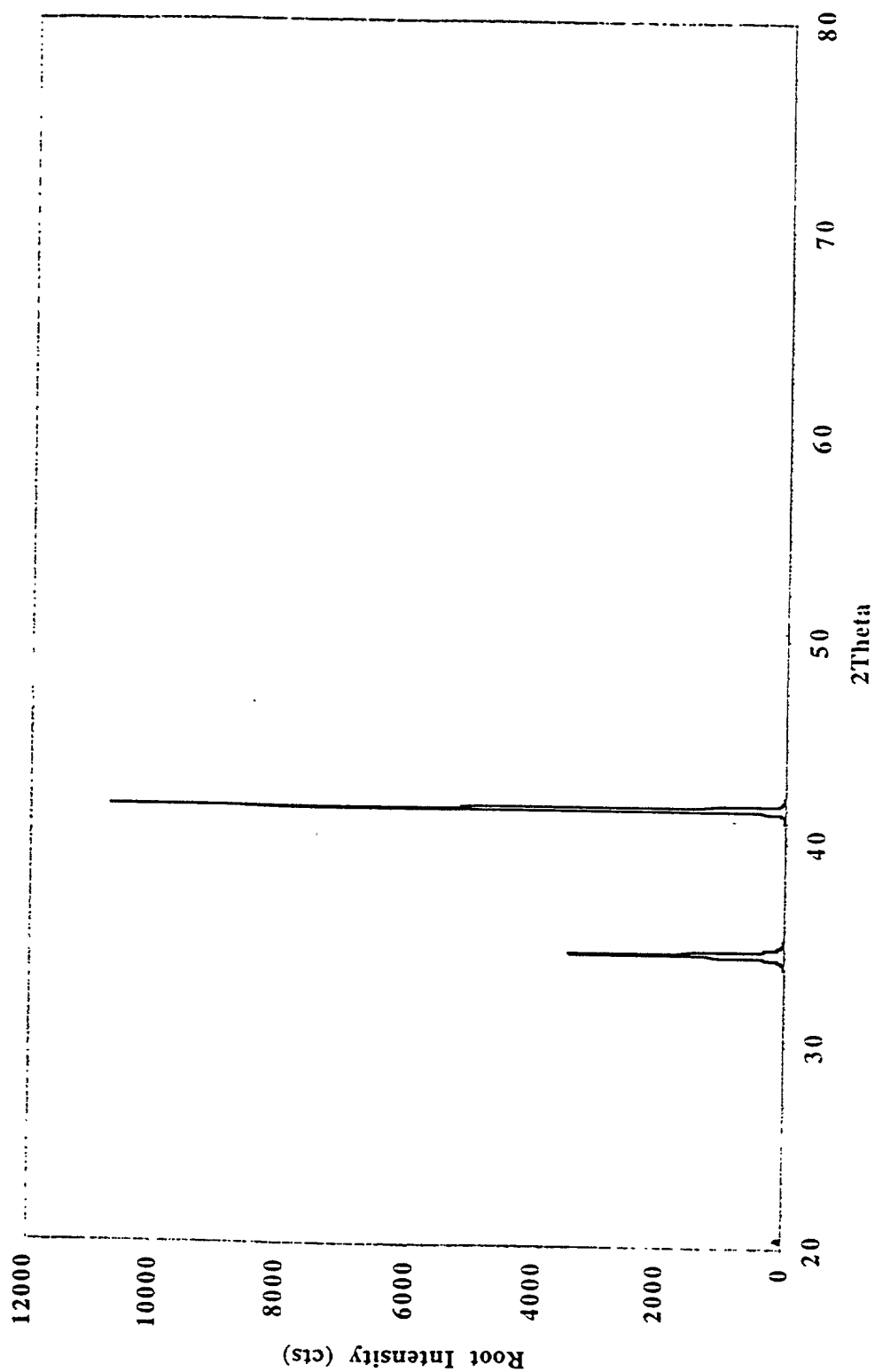
GaN Film from GNO Precursor (1 coat)



**FIGURE 19A**

6360000

GaN Film from GIP Precursor

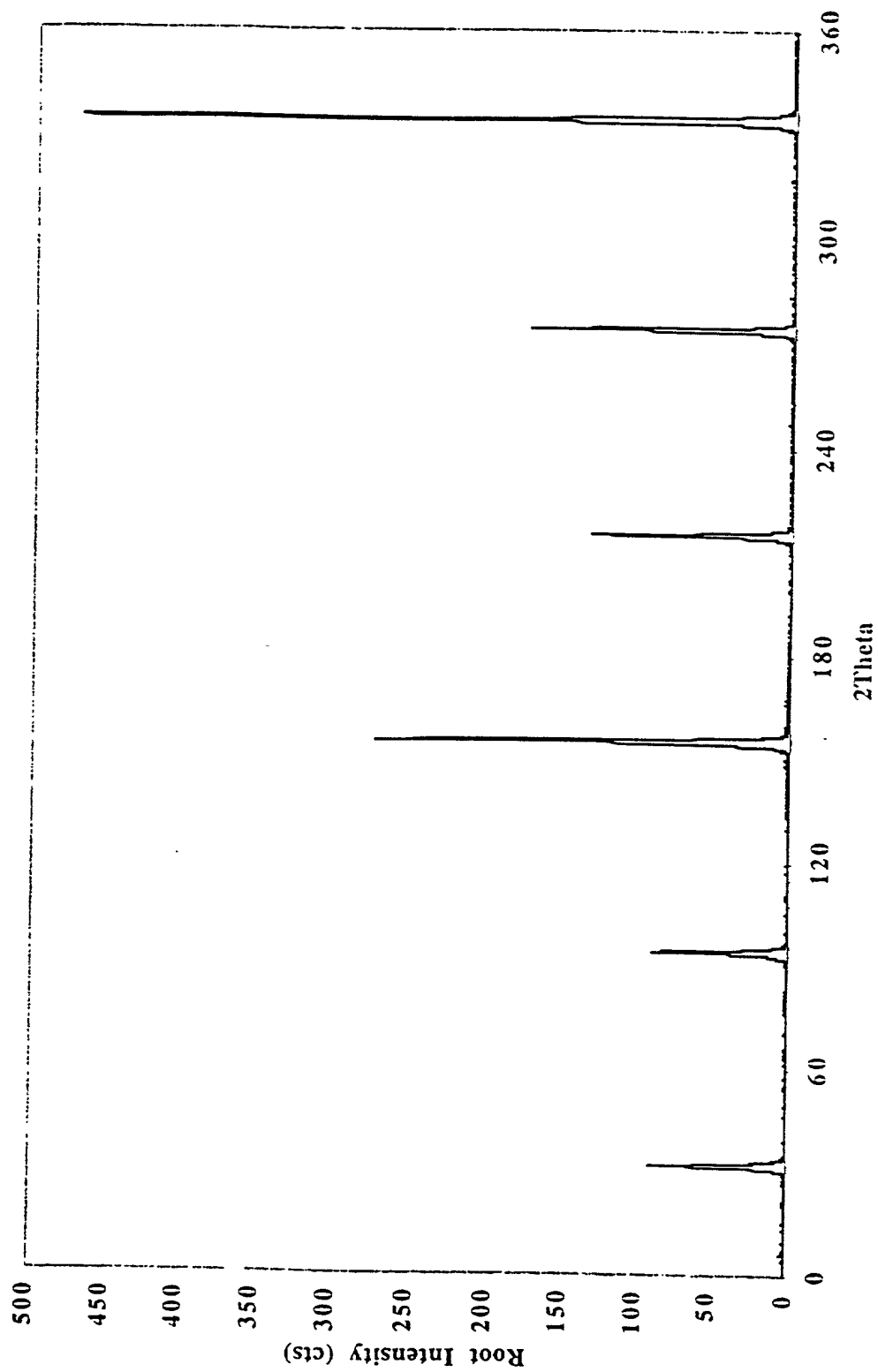


**FIGURE 19B**



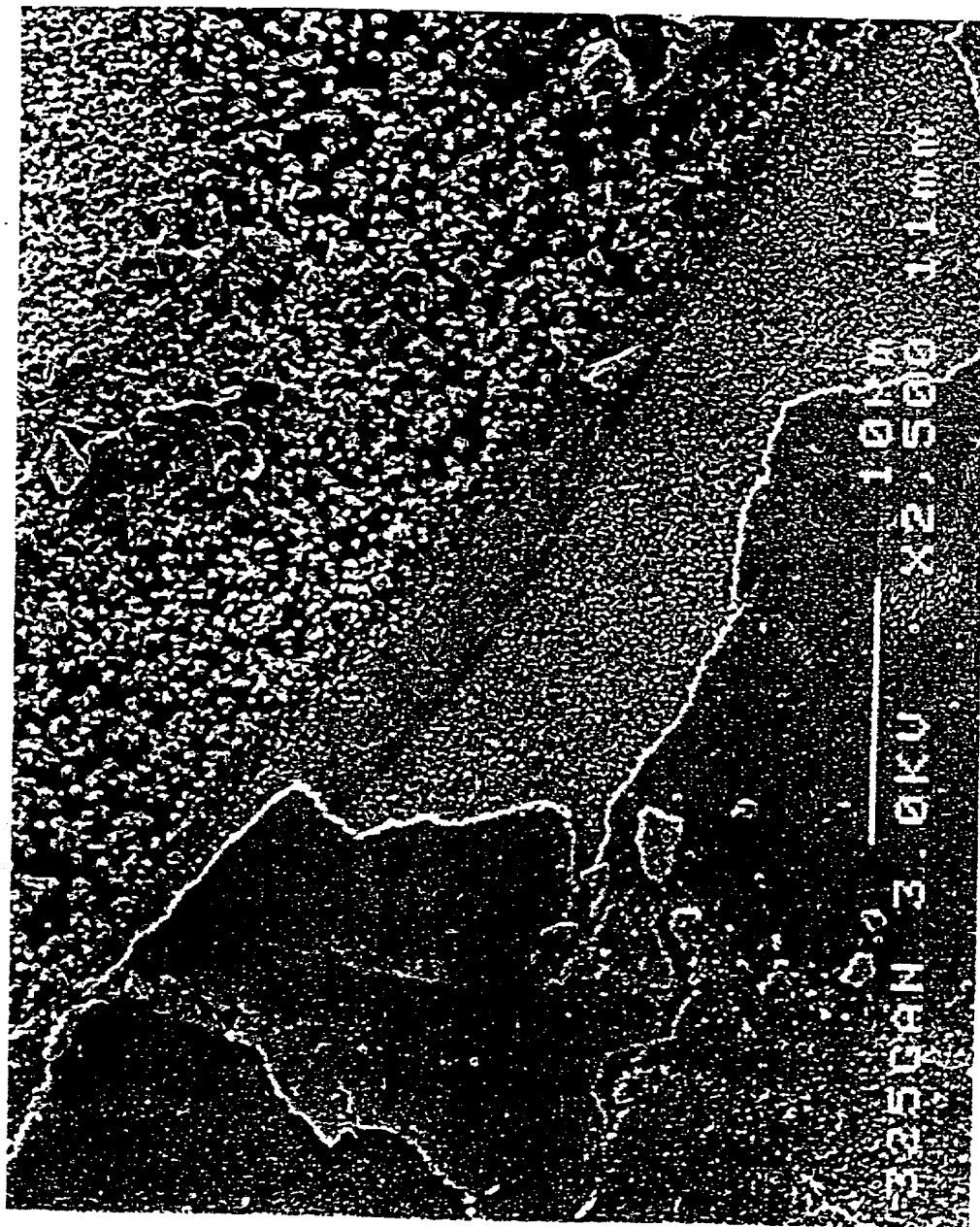
PDF GENERATED

Off Axis Phi Scan of Gan Film from GIP Precursor



**FIGURE 20**

FOOT " 6966666



**FIGURE 21**

FIGURE 22

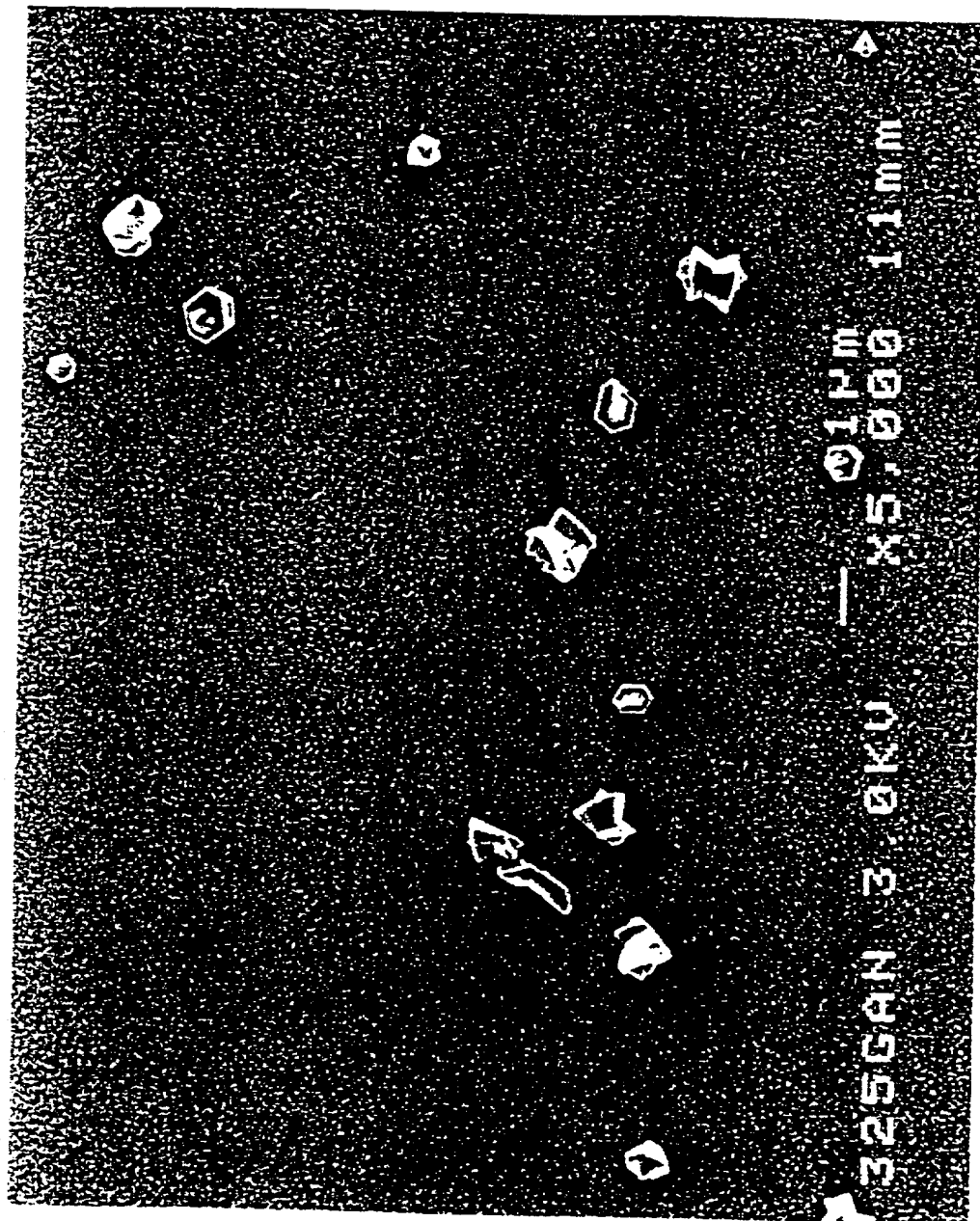


FIGURE 22

FOOT " 53550555

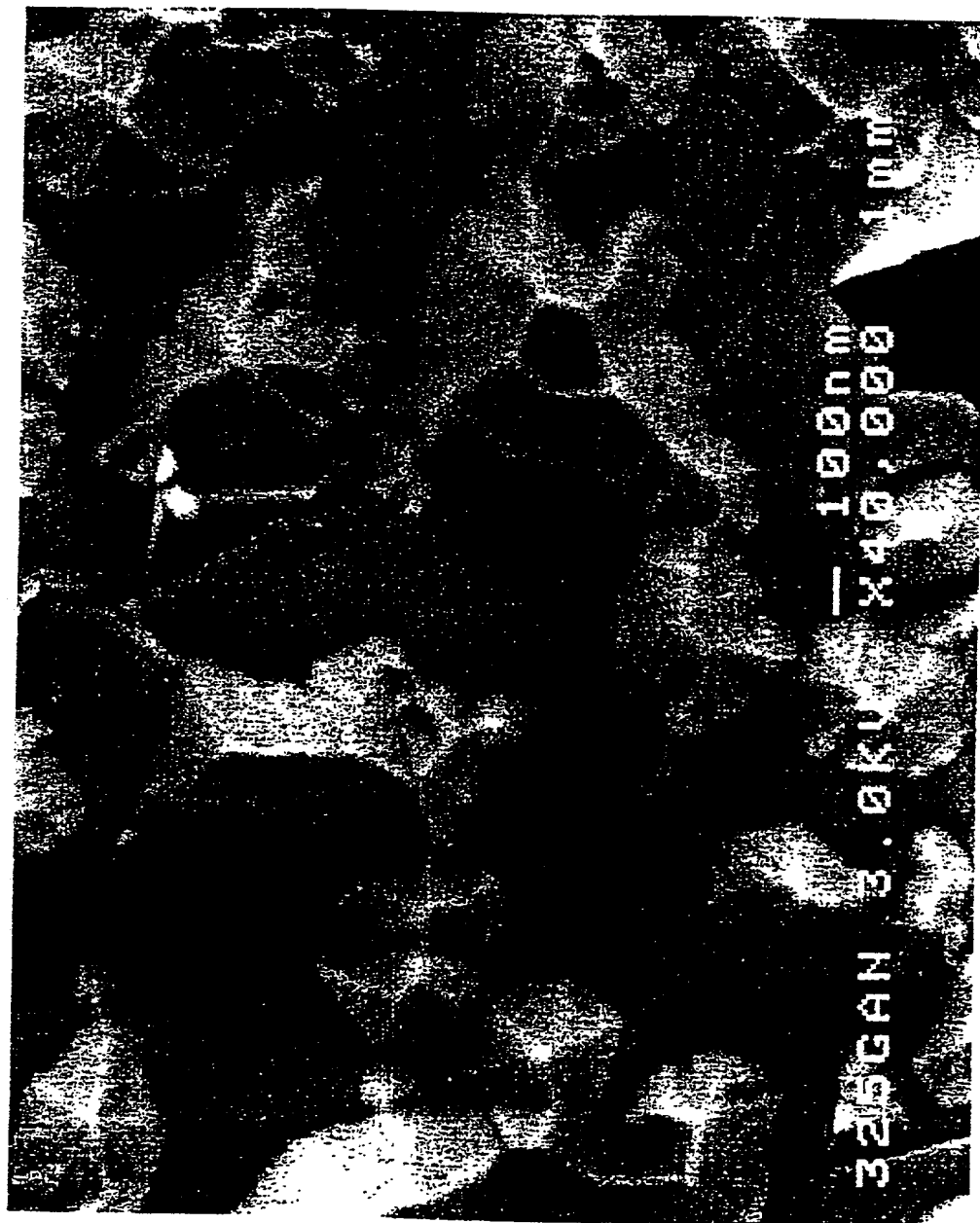


FIGURE 23

ESGAM 3 BKU X40 1000 11mm

# FIGURE 24

FOOT" 6968888

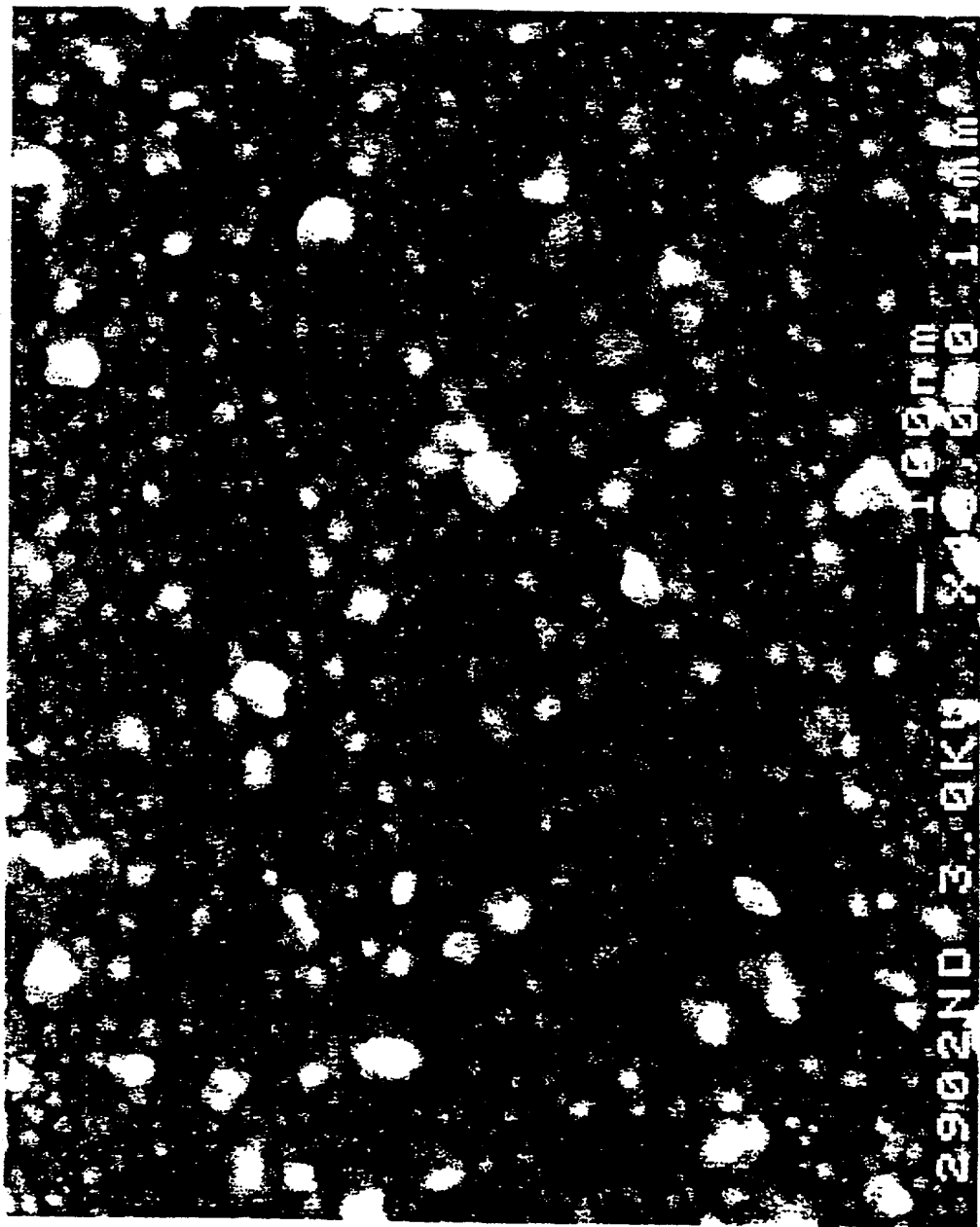
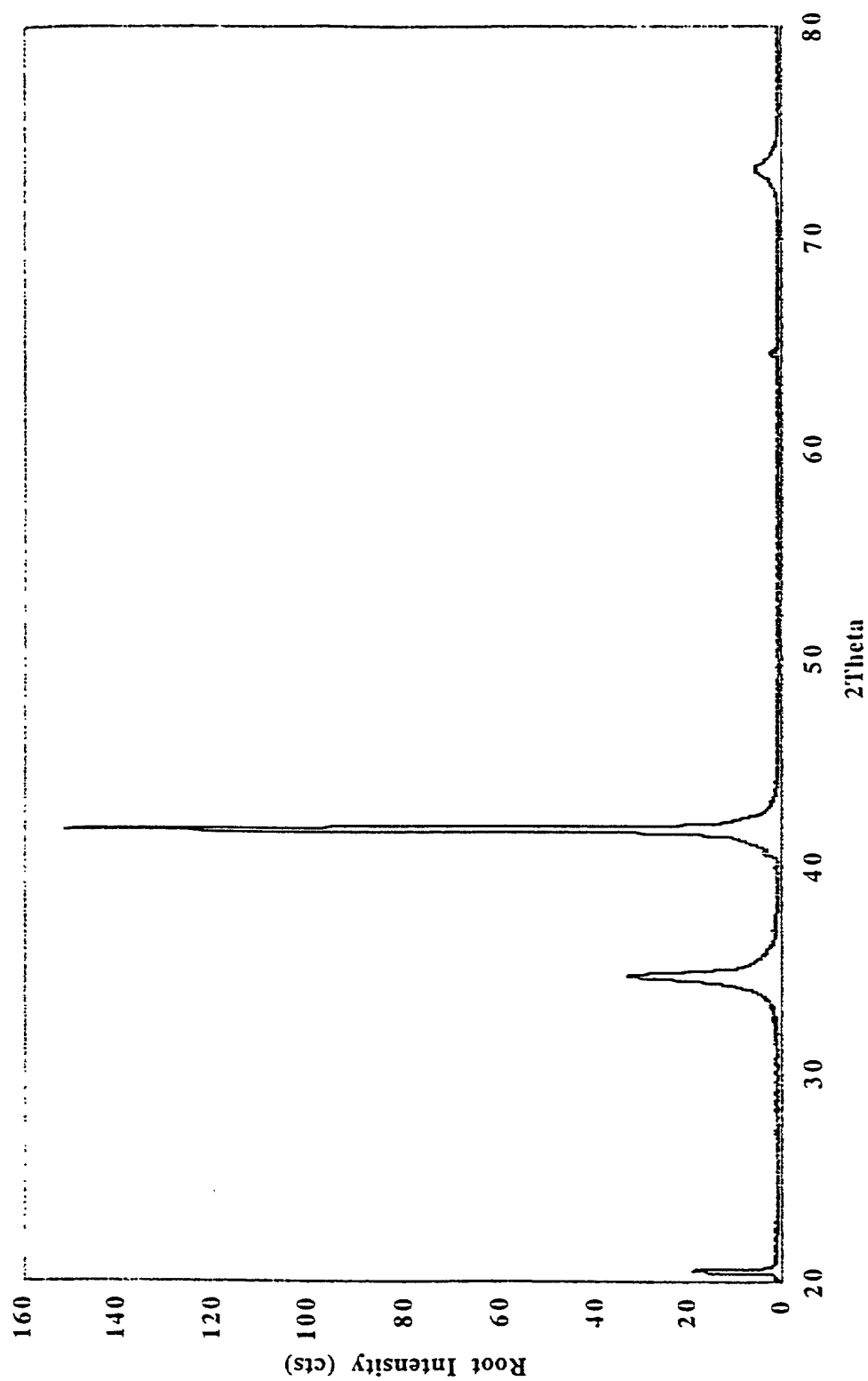


FIGURE 25

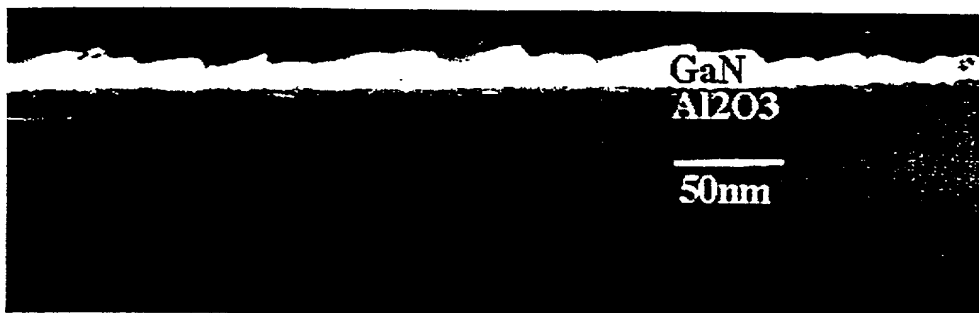
**GaN Film from GNO Precursor (2 coats)**



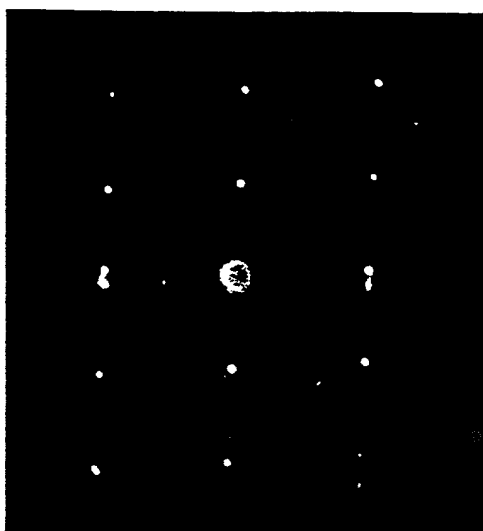
**FIGURE 26**



(a)



(b)



(c)

**FIGURE 27**



GaN290 77K

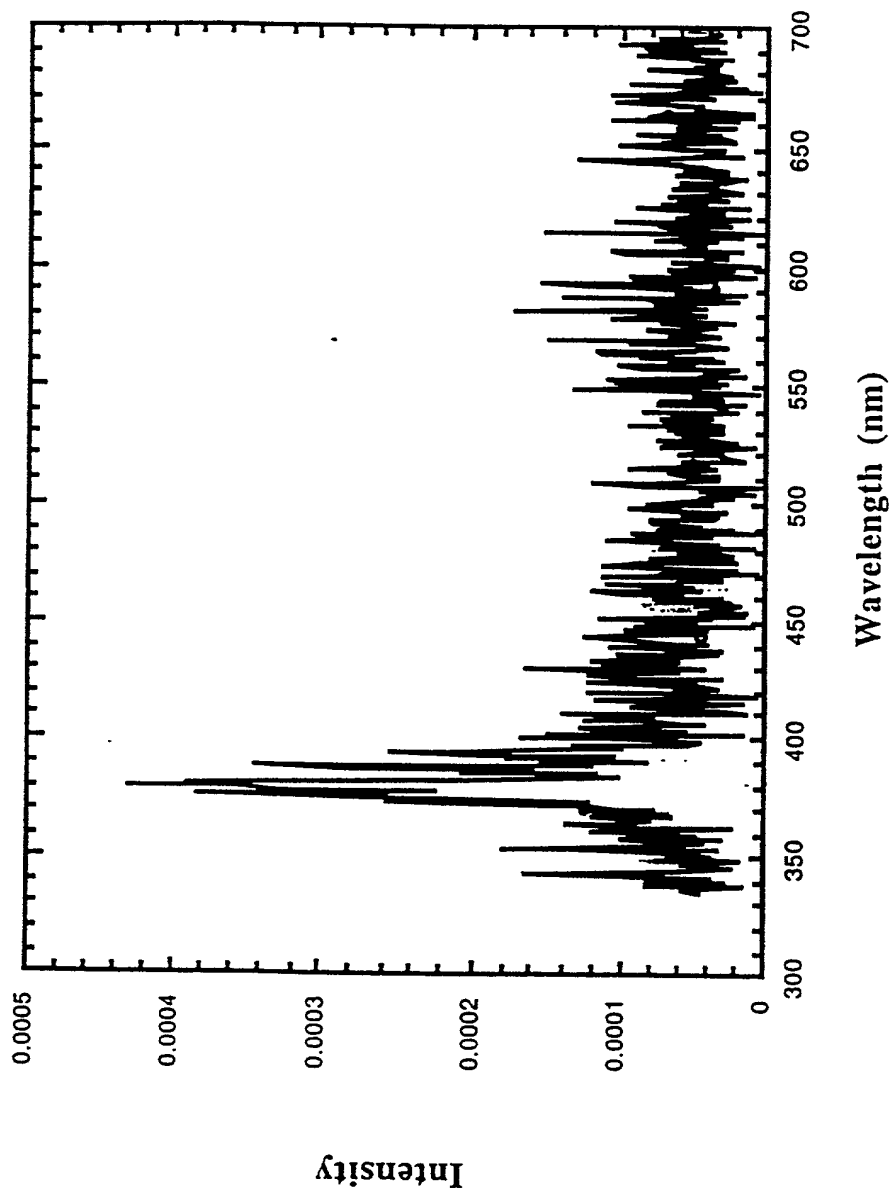


FIGURE 28